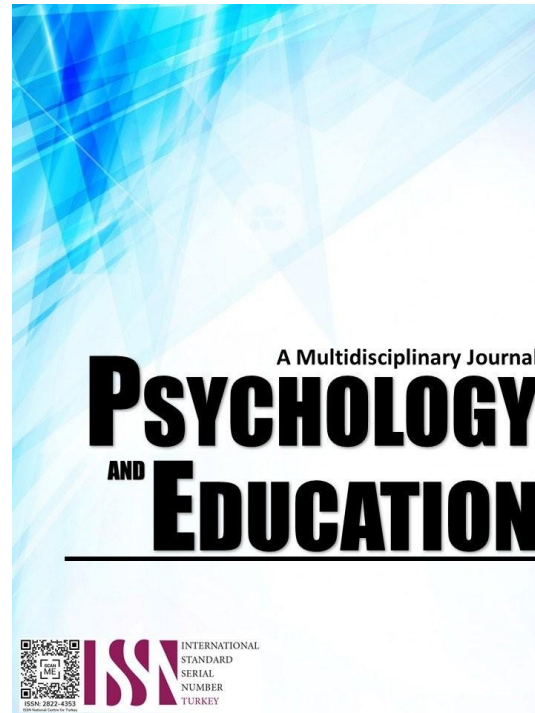


**MODERATING ROLE OF TACIT RESOURCES IN THE RELATIONSHIP
BETWEEN COMMUNICATION FLOW AND DECISION-MAKING
IN MALAYSIAN FAMILY BUSINESSES**



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Moderating Role of TACIT Resources in the Relationship Between Communication Flow and Decision-Making in Malaysian Family Businesses

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Abstract

In the context of family businesses, most prior studies have treated resources as control variables rather than as potential moderators shaping organizational processes. The moderating role of resources in the impact of communication on decision-making is underexplored. The study examined the moderating effect of resources on the relationship between communication flow and decision-making of family businesses. The objectives of the study are to: 1) describe the characteristics of the family businesses; 2) describe the perceived levels of communication flow, decision-making participation, and access to resources in family businesses. 3) examine the relationship between communication flow and decision-making in family businesses; and 4) determine whether resources moderate the relationship between communication flow and decision-making in family businesses. A survey of 291 respondents working in family businesses in Sarawak was conducted using purposive sampling. The questionnaire elicited data on characteristics of family business, communication flow, decision-making, and resources. Almost half (46%) of the family businesses had been operating for more than 20 years. While some founders aged over 70 continued to manage their companies, 28.9% were led by second-generation and 11.3% by third-generation family members. Respondents perceived communication flow, involvement in decision-making, and access to intangible resources to be at a moderate level. Using partial least squares structural equation modelling (PLS-SEM), the study found that communication flow positively influences employees' decision-making, and this relationship is moderated by the availability of resources. Employees with greater access to resources, particularly intangible ones such as trust, loyalty, and competence, benefited more from clear communication of company procedures and essential information, resulting in more active participation in decision-making. These findings suggest that family businesses should consider better sharing of company procedures and tacit knowledge as resources to benefit from employee experiences in decision-making.

Keywords: *communication flow, decision-making, resources, organisational culture, family business*

Introduction

Family business accounts for a majority of firms in countries like Thailand (Pipatanantakurn & Ratcham, 2022). Malaysia ranks seventh in the number of family businesses in the world according to the Credit Suisse Research Institute (Wong, 2017). The study showed that newer family businesses managed by first- or second-generation founders performed better, achieving higher annual share price gains of about 9% compared to older family businesses that achieved only 6.5% per annum.

Although succession planning is increasingly practised, transferring knowledge from founders to successors is a major challenge in family businesses. Founders often possess extensive tacit knowledge that is difficult to codify or transfer formally (Collins, 2010). "Tacit knowledge consists partly of technical skills — the kind of informal, hard-to-pin-down skills captured in the term 'know-how'. On the other hand, it also consists of cognitive elements such as beliefs, ideals, values, and mental models which are so ingrained in us that we take them for granted" (Nonaka & Takeuchi, 1995, p. 8). Knowledge sharing thus tends to occur informally and relies heavily on trust and interpersonal relationships (Rondi & Rovelli, 2022). When non-family employees are involved, knowledge exchange becomes even more complex as family members may withhold firm-specific knowledge to maintain control (Chrisman et al., 2014), thereby excluding them from vital access to information and decision-making.

Effective communication flow supports knowledge sharing and transfer, which are vital for informed decision-making (Inkpen & Tsang, 2005; Tsai, 2002). However, communication flow varies across firms depending on leadership style, trust, and the degree of formality in organisational processes. In smaller firms, knowledge transfer is often restricted by the lack of documentation and formal training (Pipatanantakurn & Ractham, 2022), while in larger firms, family hierarchy influences participation in decisions (Rossignoli et al., 2024). These factors show that both structural and relational dynamics shape communication flow in family businesses.

Moreover, the ability to act on shared information depends on the resources available to employees. Access to human, social, and intellectual resources enhances responsiveness and the capacity for sound decision-making (Belkhdja et al., 2022). While prior studies highlight the role of family unity and shared values in sustaining family businesses (Dou et al., 2021; Randerson et al., 2021; Söderström & Kock, 2022), little is known about how such intangible resources interact with communication to shape decision outcomes, particularly in Asian contexts where hierarchical and collectivist norms prevail.

Thus far, the literature review shows the circumstances favouring and hindering communication flow and decision-making in family businesses, as well as the availability of intangible resources in family businesses. However, the moderating role of resources in the impact of communication flow on decision-making in family businesses has not been explored. Understanding this interaction is

important because good communication flow alone may not lead to sound decision-making if employees lack adequate resources, such as knowledge, experience, or support, to act on shared information. Investigating the indirect effect of resources provides a better understanding of internal processes in family businesses. By examining the moderating role of resources, such studies extend family business research by showing how communication and resource availability influence decision-making processes in Asian contexts.

Research Objectives

The study examined the moderating effect of resources on the relationship between communication flow and decision-making of family businesses. The objectives of the study are to:

1. describe the characteristics of the family businesses.
2. describe the perceived levels of communication flow, decision-making participation, and access to resources in family businesses.
3. examine the relationship between communication flow and decision-making in family businesses.
4. determine whether resources moderate the relationship between communication flow and decision-making in family businesses.

Literature Review

Family and non-family businesses are different in terms of ownership, governance, managerial decisions, succession events, or achieving non-economic goals (Chang et al., 2022). Family businesses are organisations owned and/or managed by family members who hold executive positions (Baltazar et al., 2023). The ownership is often passed down from one generation to another. Transfer of control from the founder to successive generations used to be unplanned, but now succession planning is increasingly in place. Some family businesses may opt to engage professional managers instead of family members to be sustainable in the long run, as they have to comply with formal and informal institutional frameworks (Chang et al., 2022). The rest of the literature review focuses on communication flow, decision-making participation, and access to resources.

Communication flow

Effective communication flow facilitates knowledge sharing and transfer within organisations by ensuring that information moves smoothly among members. Knowledge sharing involves meaningful exchange of individuals' skills, experience, and expertise to create greater collective knowledge within organisations (Tsai, 2002). Knowledge transfer involves the one-to-one communication of knowledge either directly or indirectly (Inkpen & Tsang, 2005). In family businesses, where resources are often limited, knowledge sharing tends to occur informally, especially for tacit knowledge such as practical know-how and experience.

In Pipatanantakurn and Ractham's (2022) study, the Thai founders and top management pass on knowledge through social interaction with external organisational partners. Their interviews with 60 employees also showed that knowledge processes such as education, work experience, training, seminars, and strategic planning were far more common in medium and large firms (70-100%) than in small ones (55% or less), which were inclined to rely on apprenticeship in other companies and industries. Small firms also have less documentation of company policies and procedures, and formal training of staff due to a lack of resources. Successors take on important tasks in supervising employees, negotiating with stakeholders, and engaging in strategic planning earlier than successors in bigger firms, who were still studying. Pipatanantakurn and Ractham (2022) also found that the knowledge transfer was more effective when the founder and potential successors trust one another and have strong bonds.

Decision-making participation

In a family business, the founder or CEO holds central authority and has strong control over decision-making, making it hard for employees to have autonomy in decision-making. Rossignoli et al. (2024) found that in one firm, employees who disagree with the family business leader's orientation are excluded from decision-making, based on interviews with 72 employees of small and medium family businesses in Germany, Scotland, Sweden, and Italy over eight years. The employees comprised family and non-family members.

In another firm, the family business leader was open to input from non-family members, including consultants and customers. Furthermore, the sense of belonging and trust built among top management and family members enables them to be free to propose new ideas on structures and mechanisms. However, when there are family issues and conflicts, the firm is usually not interested in new ideas, resulting in an adverse effect on knowledge sharing and transfer between generations. Rossignoli et al's (2024) study showed that the family leadership approach creates different contexts for employee involvement in decision-making. The past studies have been conducted mostly in European settings, and little is understood about how communication flow influences decision-making in family businesses in the Asian setting.

Access to resources

The transfer of knowledge to succeeding generations is particularly challenging. One of the problems is that the founders of a family business are involved in all aspects of the business and acquire a lot of tacit knowledge on various aspects of the business. Tacit

knowledge constitutes resources that family business owners draw upon to run their firms. Tacit knowledge is personal and context-specific, and usually transferred through direct interaction or hands-on experience. In contrast, explicit knowledge is structured and easily communicated, often recorded in written form for reference and dissemination (Collins, 2010). Internal knowledge exchange is essential for top management to absorb and apply new knowledge in strategic decisions (Rondi & Rovelli, 2022). When family businesses employ non-family members, the keeping of knowledge within family circles makes communication flow an even bigger issue.

Knowledge transfer is greater among family businesses with top management who are non-family members. Rondi and Rovelli's (2022) survey data involved 241 CEOs of Italian firms with a minimum of 20 staff in the manufacturing and services industries, and 120 were family businesses. Their findings showed less knowledge exchange in family firms than in non-family firms. Firms with more non-family members in top management tend to have more knowledge exchange because each of them brings a different network of external contacts, thereby expanding the points of contact with the outside world. However, non-family members working in family businesses are often disadvantaged because family members may hesitate to share knowledge with outsiders for fear of losing firm-specific skills (Chrisman et al., 2014). In family businesses, however, communication dynamics are often shaped by overlapping family and business roles, which can blur hierarchies, influence trust, and affect how information flows.

Family businesses vary in their access to and management of financial, human, and social resources. Resources affect the firm's responsiveness to information and capacity to implement changes. Abundant resources may enhance the positive impact of communication by enabling quicker and more confident decision-making. The type of resources focused on is tacit knowledge, intangible resources that are vital in family businesses (Belkhdouja et al., 2022; Cabrera-Suárez et al., 2001; Del Giudice et al., 2011). Söderström and Kock's (2022) study of six family businesses in Sweden and three family businesses in Canada showed that family unity and solidarity are crucial for the continuation of family businesses. To achieve this, the founders instilled various values such as "family comes first", "good relationship with employees", and "hands-on experience". One family member emphasised the principle of sorting out conflicts outside of the boardroom and keeping family conflicts out of the formal governance structure to maintain objective decision-making. The study also highlighted shared recognition of the need to involve multiple family members in succession planning and to remain open to generational shifts in the firm's identity to sustain intergenerational continuity. Dou et al. (2021) interviewed 10 informants from six business families in Shaoxing, Zhejiang province, China. The companies had at least 50% of shares by the controlling family, and were managed by at least one second-generation family member. Their interviews showed that the founder generation uses role modelling and ensures the successive generation has a formal education to prepare them for succession. The second generation learnt values to sustain interpersonal relationships, such as being loyal and valuing friendship. To Randerson et al. (2021), this emphasis reveals the importance accorded to transmission of moral values and competence values, respectively, in Chinese family businesses. However, little is known about how the availability of resources moderates the relationship between communication flow and decision-making.

Methodology

Research Design

The research design was a survey involving quantitative data. The cross-sectional survey examined the relationship between communication flow and decision-making in family businesses, as well as the moderating role of resources. Surveys using "probability sampling methods have become one of the primary data collection tools for official statistics and researchers in health sciences, social and economic studies, business and marketing, agricultural and natural resource inventories, and other areas" (Wu, 2022, p. 283). The survey design can obtain a large amount of quantitative data that allows for testing of direct relationships and moderation effects using descriptive statistics (means, frequencies, percentages) and Partial Least Squares Structural Equation Modelling (PLS-SEM) to provide empirical evidence on how communication and resources interact to influence decision-making.

Respondents

The data for the study were from 291 respondents who work in family businesses in Sarawak, Malaysia. Using the purposive sampling technique, respondents who fulfilled these selection criteria were invited to participate in the study: (1) Malaysians living in Sarawak, (2) employees of a family business in the private sector, and (3) respondents above the age of 18 so that parental consent is not required to participate in the study.

The respondents were 291 employees from various family businesses in Malaysia. This was the sample size obtained, although the target was the minimum sample size of 384 respondents, calculated at a confidence level of 95% and an error margin of 5%. There were more females (61.9%) than males among the respondents. The average age was 31.2 years, suggesting a relatively young and early-career workforce. Most respondents were well-educated, with three out of five holding at least a bachelor's degree (56.4%). In terms of position, executives formed the majority (53.3%), followed by clerical staff (29.2%) and a smaller proportion in management roles (17.6%). This indicates that family businesses employ professionally qualified employees, moving beyond the traditional reliance on family members with informal business experience. Respondents had worked in their companies for an average of five years. Only about one in 10 employees (10.7%) were related to the company's directors or CEO, showing that most family businesses in the sample employed a largely non-family workforce. Respondents were moderately familiar with the founder and their family, with slightly higher

familiarity reported on the employees' side (mean = 4.70) compared with the founders' side (mean = 4.51). This pattern is expected, as employees need to know the family business owner, whereas it is less realistic for founders to be equally familiar with all employees.

Instrument

The family business questionnaire comprised six sections as follows:

Section 1, demographic information (7 items), Section 2, characteristics of the family business (15 items), Section 3, communication flow (6 items), Section 4, decision-making (3 items), and Section 5, resources (9 items). The questionnaire comprises 40 items that have reliability, internal consistency, convergent validity, and discriminant validity (explained in the Results section). The 7-point Likert scale was used for greater granularity in the results. The results of the analysis showed that, for the sample used in this study, there are differences between standard deviations and means of the 5- and 7-point scales, and, from the point of view of internal consistency, the 7-point scale proved to be more reliable" (Russo et al., 2021, p. 1).

Next, the alignment of the questionnaire section and objectives is described. For objective 1 on characteristics of the family businesses, the data are obtained from Section 2. For objective 2 on perceived levels of communication flow, decision-making participation, and access to resources in family businesses, the data are obtained from Sections 3, 4, and 5, respectively. For objective 3 on the relationship between communication flow and decision-making in family businesses, the data are obtained from Sections 3, 4, and 5. For objective 4 on whether resources moderate the relationship between communication flow and decision-making in family businesses, the data are obtained from Sections 3, 4, and 5.

For communication flow (Section 3), item CF2 on employee performance was adapted from Habbershan and Williams (1999), and CF5 on clarity of responsibilities. Items CF6-CF8 on clarity, documentation, and access to procedures are adapted from Zhang and Ma (2009), who took the idea that formalisation makes it easier for family businesses to employ professional managers from Weidenbaum (1996) and Lee and Tan (2001). Item CF9 on being informed about major changes was adapted from Ahlstrom (2004), who asserted that information sharing and codification of tacit knowledge aid knowledge transfer across the organisational structure.

For decision-making (Section 4), items DM2-DM4 were adapted from Chung (2012), who examined employee input in centralised governance and decision-making. For resources (Section 5), item R1 on competency of the top rung was adapted from Jones and Rose (1993), and item R3 on trust by superiors was adapted from Tsang (2001) and Weidenbaum (1996). The other items on satisfaction with the company's support and physical conditions, and loyalty were self-constructed.

Procedure

The questionnaire was printed, and researchers and five enumerators identified employees who worked in family businesses in the private sector located in Sarawak to fill in the questionnaire. The towns targeted were Kuching, Sibul, and Miri, as family businesses in smaller towns are typically smaller in scale and employ fewer non-family members. The enumerators approached their contacts through family, business, and work networks, and they also went to public places such as shopping malls to solicit willing respondents.

Ethics clearance was not required for this study as it involved no intervention, manipulation, or collection of sensitive personal data. The study posed minimal risks to respondents. The research focused on respondents' perceptions of organisational practices in family businesses and collected non-identifiable, voluntary responses from adult respondents. All data were analysed and reported in aggregate form, ensuring anonymity and minimising any potential risk to respondents.

The potential respondents were told about the objective of the research and that their participation was voluntary. The respondents were not required to write their names and personal details on the questionnaire, which meant that they remained anonymous. They were assured that their responses would be kept confidential, and the results would be reported as group patterns. Respondents who were willing to participate in the study indicated their consent before continuing to the questionnaire items.

Data Analysis

The data in the Excel sheet were analysed using descriptive statistics (means, frequencies, percentages) and Partial Least Squares Structural Equation Modelling (PLS-SEM). For Objective 1, section 2 of the questionnaire provided data on characteristics of the family businesses, and as the responses for each item were different, frequent counts and percentages were computed. For Objective 2, Sections 3, 4, and 5 of the questionnaire provided data on perceived levels of communication flow, decision-making participation, and access to resources in family businesses. The responses were expressed as "strongly disagree" (1) to "strongly agree" (7), or "not at all" (1) to "a lot" or "always" or "competent" (7), depending on the item. There were also items with responses expressed as "bad" (1) to "good" (7). For Objective 3, the questionnaire data from Sections 3, 4, and 5 were used to run Pearson correlation tests to examine the relationship between communication flow and decision-making in family businesses. The hypothesis tested was H1: Communication flow positively influences employees' decision-making.

For Objective 4 on whether resources moderate the relationship between communication flow and decision-making in family businesses, the questionnaire data from Sections 3, 4, and 5 were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM) with SmartPLS 4. The hypothesis tested was



H2: Resources moderate the relationship between communication flow and decision-making.

During the measurement model assessment, certain indicators did not meet the recommended loading threshold of 0.708 (Hair et al., 2014). However, following established guidelines, indicators with loadings below 0.708 were retained temporarily if the average variance extracted (AVE) of the construct remained at or above the minimum acceptable level of 0.50.

The Partial Least Squares Structural Equation Modelling (PLS-SEM) with SmartPLS 4 analysis involved two stages: (1) assessment of the measurement model to examine indicator reliability, internal consistency, convergent validity, and discriminant validity, and (2) assessment of the structural model to test the hypothesised relationships. The measurement model was evaluated based on indicator loadings (>0.70), AVE (>0.50), Composite Reliability (CR >0.80), and discriminant validity through the Fornell–Larcker criterion and HTMT ratio (Hair et al., 2014; Henseler et al., 2015).

Results

Characteristics of family businesses

To address Objective 1, the characteristics of the family businesses the respondents work for will be described. The family businesses were mostly in retail business (18.9%), building and construction (17.5%), oil, gas, and electric (17.2%), and manufacturing (12.4%). Fewer worked in the following industries (less than 10% each): transport and communication, agriculture and forestry, hotel and restaurants, financial services, health, real estate, and fishing, indicating that these industries may not be well-developed in Sarawak. It is also possible that fewer companies are family-owned in these industries.

Table 1. Characteristics of family businesses the respondents work for (N=291)

Characteristic		Frequency	Percentage
Industry	Retail business	55	18.9
	Building and construction	51	17.5
	Oil, gas, and electric	50	17.2
	Manufacturing	36	12.4
	Transport and communication	27	9.3
	Agriculture and forestry	26	8.9
	Financial services	18	6.2
	Health	10	3.4
	Real estate	7	2.4
	Fishing	3	1.0
	Type of family business company	Not public listed	191
Public listed		99	34.0
A company with subsidiaries	Yes	139	47.8
	No	152	52.2
Age of the company	1-5 years	34	11.7
	6-10 years	49	16.8
	11-20 years	81	27.8
	21-30 years	53	18.2
	31-40 years	25	8.6
	41-50 years	17	5.8
	More than 50 years	9	3.1
	Not sure	23	7.9
Age of the company's founder	0-20 years	3	1.0
	21-30 years	2	0.7
	31-40 years	19	6.5
	41-50 years	17	5.8
	51-60 years	41	14.1
	61-70 years	18	6.2
	More than 70 years	19	6.5
	Not sure	72	24.7
The founder's children are managing the company now	No	63	21.6
	Yes	84	28.9
	No response	44	15.1
Age of the founder's children	0-30 years	19	6.5
	31-40 years	18	6.2
	41-50 years	16	5.5
	51-60 years	12	4.1
	61-70 years	10	3.4
	More than 70 years	10	3.4
The founder's children started by getting involved in the	No response	106	36.4
	No	12	4.1



day-to-day routine	Yes	73	25.1
	No response	106	36.4
Founder's children pursue higher studies relevant to the business	No	16	5.5
	Yes	69	23.7
	No response	44	15.1
The founder's grandchildren are managing the company now	No	39	13.4
	Yes	74	25.4
	No grandchildren yet	44	15.1
Age of the founder's grandchildren	0-30 years	10	3.4
	31-40 years	8	2.7
	41-50 years	17	5.8
	No response	156	53.6
The founder's grandchildren started by getting involved in the day-to-day routine	No	2	0.7
	Yes	33	11.3
	No response	156	53.6
Founder's grandchildren pursue higher studies relevant to the business	No	7	2.4
	Yes	28	9.6
	No response	156	53.6

Note: The total number for some items is not 291 because some respondents did not have the information, or the item is not relevant.

Organisationally, two-thirds (65.6%) of the firms were not publicly listed, reflecting the dominance of privately held family businesses in Malaysia. Almost half of the companies (47.8%) had subsidiaries, suggesting a mix of small and expanding firms. In terms of business longevity, almost half (46%) had been operating for more than 20 years, suggesting a degree of stability, while 27.5% were less than 10 years old (11.7% for 1-5 years; 16.8% for 6-10 years). Regarding the founders, some respondents did not respond, either due to a lack of knowledge or perceived irrelevance of the questions. The age distribution of founders indicates that many continue to manage their companies into older age. The largest group was aged 51–60 years (14.1%), followed by 61–70 years (6.2%) and over 70 years (6.5%).

In terms of succession, control largely remained with the founders, as 21.6% of respondents reported that the founder's children were not managing the company, whereas 28.9% reported that the founder's children managed the company. Some businesses had passed to the third generation, with 11.3% reporting involvement of the founders' grandchildren. The ages of the founders' children were distributed across all age groups, ranging between 3% and 7%, while all of the founders' grandchildren were under 50 years old.

To prepare for succession, it is common for founders to involve their children and grandchildren informally in business operations at an early age. More of the founder's children (25.1%) started by participating in daily routines, compared with 11.3% of the founders' grandchildren. Formal education is increasingly part of succession planning, as 23.7% of respondents reported that the founder's children pursued studies relevant to the business, and 9.6% reported the same for the founders' grandchildren.

Perceived levels of communication flow, decision-making participation, and access to resources in family businesses

To address Objective 2, the results for the levels of communication flow, decision-making participation, and access to resources in family businesses as perceived by the respondents are reported. Table 2 shows means for communication flow, decision-making, and resources, and measurement model results.

Table 2. Means for communication flow, decision-making, and resources, and Measurement Model Results

No.	Item	Mean	Loading	AVE	CR
Communication Flow					
CF2	My boss wants me to know how well I have performed in my job in relation to performance targets.*	4.55	0.601	0.529	0.869
CF5	Are procedures documented in your company?***	4.65	0.599		
CF6	Do you have access to these documented procedures?***	4.55	0.782		
CF7	My boss wants me to know about major changes affecting the company.*	4.57	0.837		
CF8	How much do you know about major changes affecting the company?***	2.81	0.723		
CF9	My boss wants me to know important people and their relationship to the company.*	4.16	0.787		
Decision-making					
DM2	Are those making the major decisions united?***	4.78	0.978	0.922	0.972
DM3	How often have you given new ideas for the running of the company?***	4.83	0.981		
DM4	How often have your ideas been considered?***	4.69	0.920		
Resources					
R1	How competent are those holding top positions in the company?***	4.66	0.577	0.539	0.912
R2	Do you have a fair chance of being promoted?***	4.18	0.725		

R3	How much does your boss trust you?***	4.67	0.758
R4	How much does the company support you to enhance your skills and knowledge? E.g., send you for training.**	4.10	0.705
R5	How good are the physical working conditions in the company?***	4.75	0.682
R6	Will likely will you work till retirement in this company?***	3.79	0.671
R7	How often do you say good things about the company to others?***	4.54	0.819
R8	How often do you do things to protect the image of the company?***	4.76	0.834
R9	How often do you make sacrifices for the good of the company?***	4.56	0.802

Notes: CF1, CF3, CF4, DM1, DM5, and DM6 were deleted due to low loadings

*7-point Likert scale from "Strongly disagree" to "Strongly agree."

**7-point Likert scale from "Not at all" to "A lot."

For communication flow, respondents knew the expectations for them to be informed about company procedures and changes. They reported that their superiors wanted them to know their performance in relation to performance targets ($M=4.55$), major changes affecting the company ($M=4.57$), and people important to the business ($M=4.16$). They marginally agreed that procedures are well-documented ($M=4.65$), and they have access to the operational information ($M=4.55$). Documentation makes it easier to employ professional managers. However, despite the expectations, one very telling result is that they do not know much about major changes affecting the company ($M=2.81$). This suggests that, in reality, important information is not consistently reaching employees and can affect their ability to make informed decisions. The results may point to challenges in information sharing within family businesses, particularly among employees who are non-family members.

Next, decision-making results show that respondents have some opportunity to be involved, but their influence appears limited. They marginally agreed that those making the major decisions are united ($M=4.78$), showing that they had noticed discord among those in managerial positions in the family business. Respondents also reported moderate frequencies of contributing new ideas ($M = 4.83$) and having those ideas considered ($M = 4.69$). However, the gap between voicing ideas and having them taken up indicates that while employees may be given a platform to express opinions, it does not mean that they will be taken up for implementation. This pattern suggests that decision-making in these family businesses may be more consultative than participatory, with ultimate authority still concentrated among a few key family members or managers. Once employees have worked long enough in the company, they would come to realise this and may step back from offering their input. The family business loses the valuable grassroots input. Over time, this realisation can lead to disengagement, where employees gradually stop offering ideas or participating actively in decision-making. As a result, the family business risks losing valuable grassroots insights that often come from employees who are closely involved in day-to-day operations. This disengagement can reduce the capacity of the company for innovation, problem-solving, and adaptive decision-making.

Finally, the resources examined in this study are in the form of competency, trust, and loyalty rather than financial assets. Respondents working in family businesses generally demonstrate a strong sense of commitment and loyalty to their companies. Respondents reported frequently engaging in behaviours that protect the company's image ($M = 4.76$) and making personal sacrifices for the good of the company ($M = 4.56$). They also perceived top management as competent ($M = 4.66$) and felt a high level of trust from their supervisors ($M = 4.67$). Physical working conditions were rated highly ($M = 4.75$), reflecting a generally satisfactory work environment. They also spoke positively about the company to others ($M = 4.54$), but the mean scores are all below five, indicating issues of dissatisfaction.

Despite these positive perceptions, respondents reported only a moderate likelihood of remaining with the company until retirement ($M = 3.79$), suggesting some uncertainty about long-term commitment. Mean scores near the neutral point also reflected moderate perceptions of career opportunities, including promotion ($M = 4.18$) and company support for skill and knowledge development, such as training ($M = 4.10$). Limited perceived career progression can reduce employee motivation and engagement. Given that 53.3% of respondents held executive positions, 12.4% were in middle management, and 5.2% were in senior management, many employees may aspire to advance further. Still, they could feel that higher-level positions are largely reserved for family members, thereby hindering the attainment of their long-term career goals within the company.

Relationship between communication flow and decision-making in family businesses

This section presents the results for Objective 3 on the relationship between communication flow and decision-making in family businesses, beginning with the measurement and structural model assessment. Firstly, convergent validity and discriminant validity were assessed.

Convergent validity

Following Hair et al. (2017), factor loadings, AVE, and CR were used to evaluate convergent validity. To refine the measurement model, items with low loadings were deleted sequentially, and the PLS Algorithm was re-run after each removal until all constructs achieved satisfactory AVE (≥ 0.50) and indicator loadings above 0.70. As a result, three items (CF1, CF3, CF4) were deleted from communication flow (leaving CF2, CF5, CF6, CF7, CF8, CF9), and three items (DM1, DM5, and DM6) were deleted from decision-making (leaving DM2, DM3, DM4). The loadings of the deleted items did not reach the recommended threshold of 0.708 (Hair et al., 2014). Even though the loadings of CF2 and CF5 did not reach the recommended threshold of 0.708, these two items were retained since the AVE for communication flow (0.529) exceeded the minimum acceptable level of 0.50 (Ramayah et al., 2018).

After item refinement, all constructs demonstrated satisfactory CR values above 0.80, confirming internal consistency. Specifically, the CR for communication flow was 0.869 and for decision-making, 0.972. The AVE values of 0.529 and 0.922, respectively, indicate that both constructs met the reliability and convergent validity requirements.

Discriminant Validity

Discriminant validity was assessed using the Fornell-Larcker criterion, cross-loadings, and the Heterotrait-Monotrait ratio of correlations (HTMT) inference. According to the Fornell-Larcker (1981) criterion, the square root of each construct’s AVE should exceed its correlations with other constructs. The square roots of AVE were 0.727 for communication flow and 0.960 for decision-making, both higher than their inter-construct correlation (0.386), showing satisfactory discriminant validity. The cross-loading analysis also supported this finding, as all indicators loaded more strongly on their respective constructs than on others. Loadings for communication flow ranged from 0.599 to 0.837, while those for decision-making ranged from 0.920 to 0.981, indicating no issue of high cross-loading (Ramayah et al., 2018).

Furthermore, discriminant validity was confirmed through the HTMT inference, using the bootstrapping technique at a 0.10 significance level (90% confidence interval), as recommended by Henseler et al. (2015). The HTMT inference between decision-making and communication flow showed that the lower (0.347) and upper (0.465) bounds of the confidence interval did not include the value of 1 (original sample = 0.411, sample mean = 0.409, bias = -0.002), providing strong evidence of discriminant validity between the constructs.

Assessment of the Structural Model

After validating the measurement model, the structural model was assessed to test the hypothesised relationships among the constructs (H1).

H1: Communication flow positively influences employees’ decision-making.

The path coefficient bootstrapping analysis revealed that communication flow had a significant positive effect on decision-making (original sample = 0.386, sample mean = 0.392, standard deviation = 0.031, $t = 12.475$, $p < 0.001$). This finding indicates that stronger communication flow within family businesses is associated with greater employee participation and effectiveness in decision-making.

Subsequent analysis of the moderating effect examines whether the relationship between communication flow and decision-making varies across different levels of resource availability. The results show resources may strengthen or weaken the association between the independent variable (communication) and the dependent variable (decision-making).

Moderation of the relationship between communication flow and decision-making

To address Objective 4, in this section, the results on resources being a moderating variable on the relationship between communication flow and decision-making are reported. To test the moderation hypothesis (H2), the interaction (communication flow × resources) was created and incorporated into the structural model to examine whether resources moderate the relationship.

H2: Resources moderate the relationship between communication flow and decision-making.

The revised structural model, including the moderating path, is shown in Figure 2 (indicated by ComFlow*Resources). This model illustrates the direct effects of communication flow and resources on decision-making as well as the moderating effect of resources represented by the interaction effect (communication flow × resources).

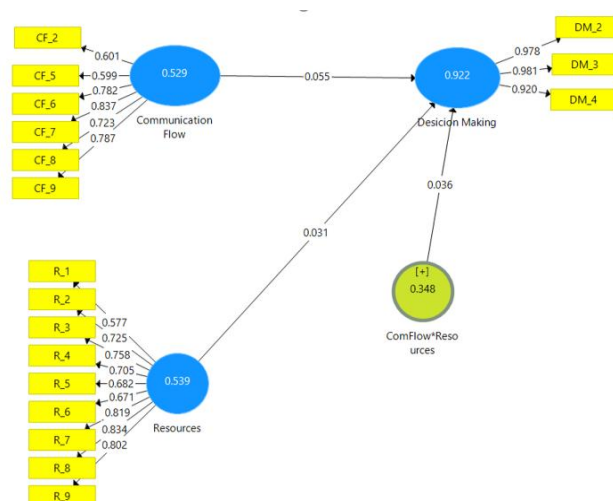


Figure 1. Revised structural model including the moderating path

Before testing the significance of the moderating effect on decision-making, the effect size (f^2) was assessed to determine the magnitude of the moderation impact. The f^2 value of 0.036 indicates a small effect size according to Cohen (1988). Although the beta coefficient for the interaction effect (communication flow \times resources) ($\beta = 0.036$) suggested a positive effect, the statistical significance of this effect requires further testing through a bootstrapping procedure.

The results of the bootstrapping analysis are shown in Figure 3, which provides the Original Sample (O), Sample Mean (M), Standard Deviation (STDev), t-values, and p-values for each path coefficient in the model. The interaction effect (communication flow \times resources \rightarrow decision-making) is significant at $p < 0.01$, with a t-value of 6.32, indicating that resources significantly moderate the relationship between communication flow and decision-making.

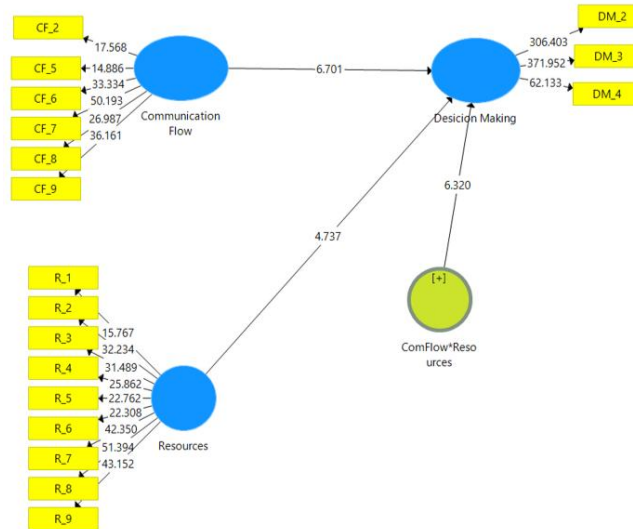


Figure 2. Bootstrapping result of the interaction effect (communication flow \times resources \rightarrow decision-making)

Table 3. Interaction effect of communication flow \times resources on decision-making in family businesses

	Original sample (O)	Sample mean (M)	Standard deviation (STDev)	T Statistics (o/STDev)	P values
Communication Flow*Resources	0.076	0.085	0.012	6.32	0
Communication Flow	0.265	0.268	0.039	6.701	0
Decision making	0.2	0.198	0.042	4.738	0

The bootstrapping results confirmed that the interaction effect of communication flow \times resources on decision-making was positive and statistically significant ($\beta = 0.076$, $t = 6.32$, $p < 0.01$). This finding supports Hypothesis 2, which proposed that resources moderate the relationship between communication flow and decision-making.

The interaction plot (Figure 4) illustrates the moderating effect between communication flow and decision making at different levels of resources (high vs. low). The three lines represent levels of resources at one standard deviation (SD) below the mean (low resources), at the mean (moderate resources), and one SD above the mean (high resources). All three lines have positive slopes, indicating that communication flow is positively associated with decision-making across all levels of resources. However, the slope for high resources (green line) is steeper than that for mean (red) and low (blue) resources.

This suggests that the positive relationship between communication flow and decision-making is stronger when resources are high. This confirms the hypothesised moderating role of resources in strengthening the influence of communication flow on employees' input in decision-making in family businesses. This visual pattern supports the statistical result obtained from the bootstrapping analysis, confirming that resources significantly and positively moderate the effect of communication flow on decision-making.

The interaction plot supports the moderating hypothesis (H2), which posits that resources strengthen the relationship between communication flow and decision-making. In other words, transparency or good communication flow within family businesses contributes more substantially to decision-making effectiveness when employees have greater access to organisational resources. The intangible resources likely enabled the employees to use the shared information to make better decisions and engage in collaborative problem-solving.

Conversely, employees side-lined or unnoticed by the top management (lacking the resources) are not allowed to contribute to decision-making despite being clear about job responsibilities, performance targets, company procedures, and major changes taking place in the company. The influence of communication flow on decision-making is weaker, suggesting that being informed is insufficient to drive effective decision-making without adequate management recognition, trust, and support.

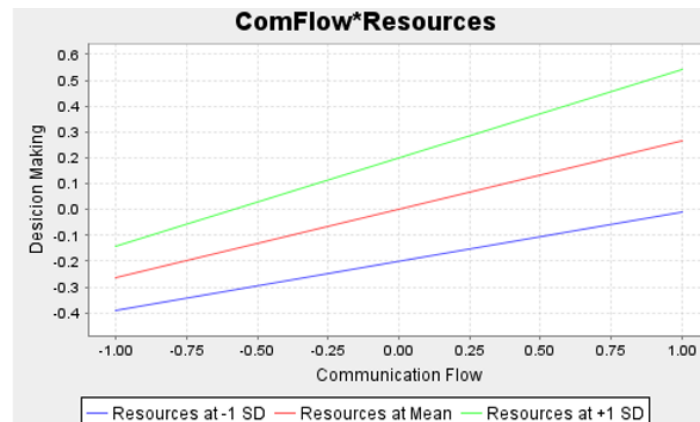


Figure 3. An interaction plot illustrating the moderation between communication flow and decision-making at low, medium, and high levels of resources

Discussion

The study shows that effective communication flow enhances employees' involvement in decision-making in family businesses, and the availability of intangible resources strengthens the impact of communication flow on decision-making.

First, being in the loop of important communication and being familiar with job responsibilities and company procedures increases employees' involvement in decision-making in family businesses. The communication flow dealt with in the present study is not about the often-studied dissemination of information or knowledge sharing by founders with family and non-family members (e.g., Chrisman et al., 2014; Inkpen & Tsang, 2005; Rondi & Rovelli, 2022; Tsai, 2002). A study on family businesses of various sizes in Thailand (Pipatanantakum & Ractham, 2022) showed that employees in bigger family businesses are more likely to be familiar with company procedures because of better documentation and staff training. The present findings offer a new angle on communication flow, that is, familiarity with company procedures has an impact on participatory decision-making.

The present study indicates that the employees have given new ideas for the running of the company, some of which were considered for implementation. However, the level of agreement for the items on decision-making was not exceedingly high, showing some reservations about how much their input is valued by the top management. This is a group result based on 291 employees working in Malaysian family businesses. The variability in the result concurs with Rossignoli et al.'s (2024) study in Germany, Scotland, Sweden, and Italy because, in their study, some companies were open to including employees in decision-making, whereas others were not. When communication is transparent, employees are better equipped to make informed decisions, resulting in better achievement of company goals.

Second, the study showed that while effective communication provides the foundation for participative decision-making, resources act as a catalyst that enables employees to translate shared understanding into insightful decisions. The resources focused on in the present study are intangible; that is, the employees in the family businesses studied perceived moderate recognition, trust, and support from the top management, and responded with moderate loyalty, such as protecting the image of the company, making sacrifices for the company, and working there till retirement. Making sacrifices is among the values passed on by the founder to the second generation in six family firms in Zhejiang, China (Dou et al., 2021). Still, the other values emphasised are different due to the influence of Confucianism. The founders of Chinese businesses ensured that their successors learnt moral values that make them a good person (integrity, humility, responsibility, and loyalty) and competence values, particularly creativity, ambition, social responsibility, and tenacity. The intangible resources valued in the Swedish and Canadian family businesses in Söderström and Kock's (2022) study are again different; they are family unity, relationship, and hands-on experience. In the present study, the focus was on the employees' offer of intangible resources to the company (e.g., loyalty) in response to recognition as valued members of the family business. This is a new finding because other past studies focused on the intergenerational transmission of values from the founder to the second-generation successors (Dou et al., 2021; Söderström & Kock, 2022). The success of family businesses depends on employees internalising and enacting the values upheld by the founders because these shared values create a sense of belonging and mutual trust that strengthen communication flow and enhance decision-making. The present study extends prior research by going beyond intergenerational transfer within the family to show that when family businesses recognise and support employees as valued members, they foster reciprocal loyalty, that is, an exchange of intangible resources that strengthens the relationships between family and non-family employees.

Conclusions

The study found that communication flow has a positive effect on employees' decision-making in family businesses, and this effect is influenced by the availability of resources. Employees with higher access to resources benefit more from clear communication, making better decisions, while those with limited resources gain less from the same communication flow. Resources are intangibles in the

present study, encompassing trust, loyalty, and competence rather than financial resources.

Overall, this study contributes new evidence that connects three important aspects of family businesses—communication flow, resources, and decision-making. While earlier research has established the individual importance of each, few have examined their interaction. The results show that family firms with stronger communication and adequate intangible resources encourage participative decision-making, while those with limited resources gain less benefit even from open communication. This helps explain why some family businesses adapt more effectively than others.

A practical implication of the findings is that family business owners should not only focus on improving communication mechanisms but also ensure that adequate intangible resources are available to support decision-making processes. The tacit knowledge acquired by founders and senior family members is a vital but difficult-to-transfer resource (Belkhdja et al., 2022; Cabrera-Suárez et al., 2001; Del Giudice et al., 2011). Therefore, it is important to put in place mechanisms for good communication flow and resource building through formal training, close interaction with top management, and hands-on experience so that the tacit knowledge becomes more accessible and usable by other employees, resulting in better decisions.

A limitation of this study is that it relied on self-reported measures, which may be prone to social desirability bias, as employees tend to report more acceptable results rather than criticise the management of the company. Next, the present study cannot answer the question of how intangible resources are used in enhancing the communication flow and related operations in the management of the family business because of the use of the Likert scale. However, future studies can employ a qualitative approach using an interpretative paradigm to understand the context and unique experiences of the family members from different generations. Finally, while the present study focused on intangible resources, such as trust, recognition, and loyalty, future research should consider other types of resources (e.g., financial, technical, and human capital) that may also shape how communication flow influences decision-making in family businesses. As family businesses grow, increasing hierarchical layers can restrict communication flow and reduce access to information. Therefore, examining whether the moderating role of resources differs across small and large family businesses would shed light on how firm size affects communication and decision-making dynamics.

References

- Ahlstrom, D., Young, M. N., Chan, E. S., & Bruton, G. D. (2004). Facing constraints to growth? Overseas Chinese entrepreneurs and traditional business practices in East Asia. *Asia Pacific Journal of Management*, 21(3), 263-285. <https://doi.org/10.1023/B:APJM.0000036463.20310.de>
- Baltazar, J. R., Fernandes, C., Ramadani, V., & Hughes, M. (2023). Family business succession and innovation: A systematic literature review. *Review of Managerial Science*, 17, 2897-2920. <https://doi.org/10.1007/s11846-022-00607-8>
- Belkhdja, O., Becheikh, N., & Landry, R. (2022). Managing knowledge resources in family firms: Opportunity of challenge. *Sustainability*, 14(9), 5087. DOI:10.3390/su14095087
- Cabrera-Suárez, K., De Saá-Pérez, P., & García-Almeida, D. (2001). The succession process from a resource- and knowledge-based view of the family firm. *Family Business Review*, 14(1), 37-46. <https://doi.org/10.1111/j.1741-6248.2001.00037.x>
- Chang, E. P. C., Zare, S., Ramadani, V. (2022). How is a larger family business different from a non-family one? *Journal of Business Research*, 139, 292-302. <https://doi.org/10.1016/j.jbusres.2021.09.060>
- Chrisman, J.J., Memili, E., & Misra, K. (2014). Non-family managers, family firms, and the winner's curse: the influence of non-economic goals and bounded rationality. *Entrepreneurship Theory and Practice*, 38, 1103-1127. <https://doi.org/10.1111/etap.12014>
- Chung, H. M. (2013). The role of family management and family ownership in diversification: The case of family business groups. *Asia Pacific Journal of Management*, 30(3), 871-891. <https://doi.org/10.1007/s10490-012-9284-x>
- Cohen, J. (1988). Set correlation and contingency tables. *Applied Psychological Measurement*, 12(4), 425-434. <https://doi.org/10.1177/014662168801200410>
- Collins, H. (2010). Tacit and explicit knowledge. University of Chicago Press.
- Del Giudice, M., Silvestri, C., & Fiorentino, D. (2011). Knowledge and the family business: The governance and management of family firms in the new knowledge economy. Springer.
- Dou, J., E. Su, S. Li, & D. Holt. (2020). Transgenerational entrepreneurship in business families: What is effectively learned and what is successfully transferred. *Entrepreneurship & Regional Development* 33(5-6), 427-441. <https://doi.org/10.1080/08985626.2020.1727090>
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *J. Mark. Res.* 18, 39-50. doi: 10.2307/3151312
- Habbershon, T. G., & Williams, M. L. (1999). A resource-based framework for assessing the strategic advantages of family firms.

Family Business Review, 12(1), 1-25. <https://doi.org/10.1111/j.1741-6248.1999.00001.x>

Hair Jr, J. F., Matthews, L. M., Matthews, R. L., & Sarstedt, M. (2017). PLS-SEM or CB-SEM: Updated guidelines on which method to use. *International Journal of Multivariate Data Analysis*, 1(2), 107-123. <https://doi.org/10.1016/j.techfore.2021.121092>

Hair, J. F. Jr., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2014). *A primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. Sage Publications.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115-135. <https://doi.org/10.1007/s11747-014-0403-8>

Humphrey, R. H., Massis, A. D., Picone, P. M., Tang, Y., & Piccolo, R. F. (2021). The psychological foundations of management in family firms: Emotions, memories, and experiences. *Family Business Review*, 34(2), 122-131. <https://doi.org/10.1177/08944865211012139>

Inkpen, A.C.; & Tsang, E.W.K. (2005). Social capital networks and knowledge transfer. *Acad. Manag. Rev.*, 30, 146-165. <https://doi.org/10.1016/j.ijinfomgt.2015.11.008>

Jones, G., & Rose, M. (2013). *Family capitalism: Best practices in ownership and leadership*. Routledge.

Lee, J., & Tan, F. (2001). Growth of Chinese family enterprises in Singapore. *Family Business Review*, 14(1), 49-74. DOI:10.1111/j.1741-6248.2001.00049.x

Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. Oxford University Press.

Pipatanantakurn, K., & Ractham, V. V. (2022). The role of knowledge creation and transfer in family firm succession. *Sustainability*, 14(10), 5845. <https://doi.org/10.3390/su14105845>

Ramayah, T., Cheah, J., Chuah, F., Ting, H., & Ali Memom, M. (2018). *Partial Least Squares Structural Equation Modeling (PLS-SEM) using SmartPLS 3.0 (2nd ed.)*. Pearson.

Randerson, K., Frank, H., Dibrell, C., & Memili, E. (2021). Editorial Note: From family to families: Pushing family entrepreneurship forward. *Entrepreneurship & Regional Development*, 33(5-6), 369-382. <https://doi.org/10.1080/08985626.2020.1727091>

Rondi, E., & Rovelli, P. (2022). Exchanging knowledge in the TMT to realize more innovation opportunities: what can family firms do? *Journal of Knowledge Management*, 26(2), 350-374. <https://doi.org/10.1108/JKM-08-2020-0645>

Rossignoli, F., Lionzo, A., Henschel, T., & Boers, B. (2024). Knowledge sharing in family SMEs: the role of communities of practice. *Journal of Family Business Management*, 14(2), 310-331. <https://doi.org/10.1108/JFBM-03-2023-0038>

Russo, G. M., Tomei, P. A., Serra, B., & Mello, S. (2021). Differences in the use of 5-or 7-point Likert scale: an application in food safety culture. *Organizational Cultures*, 21(2), 1-17. <https://doi.org/10.18848/2327-8013/CGP/v21i02/1-17>

Saxena, A. (2013). Transgenerational succession in business groups in India. *Asia Pacific Journal of Management*, 30(3), 769-789. <https://link.springer.com/article/10.1007/s10490-013-9342-z>

Söderström, H., & Kock, D. (2023). Intergenerational continuity and change: Exploring succession patterns, decision-making factors, and emerging themes in family business transitions. [Master's thesis, University of Jönköping].

Tsai, W. (2002). Social structure of coopetition within a multiunit organization: coordination, competition, and intraorganizational knowledge sharing. *Organization Science*, 13(2), 179-190. DOI:10.1287/ORSC.13.2.179.536

Tsang, E. W. (2001). Internationalizing the family firm: A case study of a Chinese family business. *Journal of Small Business Management*, 39(1), 88-93. <https://doi.org/10.1111/0447-2778.00008>

Wang, C., Flamini, G., Wang, K., Pei, R., & Chen, C. (2021). Entrepreneurial decision-making and family social capital. *Management Decision*, 59(5), 938-952. <https://doi.org/10.1108/MD-10-2019-1414>

Weidenbaum, M. (1996). The Chinese family business enterprise. *California Management Review*, 38(4), 141-156. <https://cmr.berkeley.edu/1996/08/38-4-the-chinese-family-business-enterprise/>

Wong, E. L. (2017, October 30). Malaysia ranks seventh in the number of family-owned businesses, says Credit Suisse. <https://theedgemalaysia.com/article/malaysia-ranks-seventh-number-familyowned-businesses-says-credit-suisse>

Wu, C. (2022). Statistical inference with non-probability survey samples. *Survey Methodology*, 48(2), 283-311. <http://www.statcan.gc.ca/pub/12-001-x/2022002/article/00002-eng.htm>

Zhang, J., & Ma, H. (2009). Adoption of professional management in Chinese family business: A multilevel analysis of impetuses and




impediments. *Asia Pacific Journal of Management*, 26(1), 119-139. <https://doi.org/10.1007/s10490-008-9099-y>.

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